TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 14 **September, 1948** **Number 7**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Ackerman, William C. See **Bryson, Lyman.**

Albright, John G. College physics. 735p. 1948. Ronald, New York, $4.50.

Review of scientific instruments, May 1948, p.340. 1⅓ col.

"A thorough, complete treatment of all the more important topics of classical physics for the usual one-year introductory course. The author is obviously an experienced teacher who knows where to put the emphasis to forestall the student's questions. A larger part than is customary (about 45 percent) is devoted to mechanics. The treatment in this section is detailed, with many illustrations, worked examples, and numerical problems . . . This would seem to be a very teachable book, with a commendable emphasis on the fundamentals of classical physics. By the elimination of some of the less important developments of the past and the substitution of modern topics which fascinate even the non-scientific students, this could be made into an even better text. As it is, its thoroughness, clarity of expression, and emphasis on mechanics will appeal to many teachers. It should be well received." *W. W. Watson.*

Andersen, Paul. Substructure analysis and design. 305p. 1948. Irwin-Farnham, Chicago, $4.50.

Engineering news-record, June 10, 1948, p.112. ⅝ col.

"Presenting analysis and design of substructure by conventional methods, this volume is designed as a text, and will also aid designers. Soil mechanics and construction methods are intentionally treated incidentally . . . Serves as an introduction to the entire subject of foundaton [sic] engineering, and as a detailed text on most of the physical substructures to be built . . . Contains much well presented information not otherwise conveniently available in one source. Considering the breadth of the field and the limited length of the book, the intended scope appears to have been covered excellently. For post-graduate study and engineering practice, specialized treatments of soil mechanics, piles and underpinning will be required." *Robert D. Chellis.*

Bailey, Alton E., ed. Cottonseed and cottonseed products; their chemistry and chemical technology. 960p. 1948. Interscience Publishers, New York, $17.50.

Food industries, June 1948, p.197. ½ col.

"A comprehensive treatise on the chemistry and technology of the cottonseed industry that should be of value to the layman interested in the subject, as well as to the scientist. Chapters on the various aspects of this broad field have been prepared by specialists. This authoritative approach permits discussion of the utilization, as well as the production, of cottonseed products. Attention has been given also to such historical, economic and agronomic factors as have influenced present day technology . . . Will serve . . . as a text and reference book for students and for industrial workers, and management engaged in processes involving cottonseed."

Soybean digest, May 1948, p.41. ⅝ col.

"An authoritative treatise on the chemistry, technology and utilization of cottonseed and cottonseed products written by a group of specialists, and coordinated and integrated by Alton E. Bailey . . . The treatment of the subject matter is very broad. While of course all scientific and technological information has been collected and presented, nonchemical and engineering knowledge and economic and agronomic factors have been taken into account to a much greater degree than the title of the book might lead to believe . . . A source of information for the expert . . . Also of great value to technologists, merchants and laymen as a stimulating introduction to an important agricultural industry."

Beitman, Morris N., comp. Most-often-needed FM and television servicing information. 192p. 1948. Supreme Publications, Chicago, $2.

General Electric review, May 1948, p.56. ⅓ col.

"A compilation of servicing notes for forty of the most popular FM and television receivers of 1947-1948. The material was prepared explicitly for radio servicemen and is similar to previous books of the same publisher on servicing home radio receivers. In general, the data given for each receiver are in the form of a photostatic copy of the manufacturer's service notes for that receiver. Each section contains all the information usually supplied by the manufacturer for servicemen, including descriptions of special features of the circuits, schematic circuit diagrams, photographs and diagrams of sub-assemblies and location of parts, and specific alignment instructions . . . Should also be useful to circuit designers and others interested in the practical aspects of FM and television receivers." *H. R. Summerhayes, jr.*

Boas, Walter. Introduction to the physics of metals and alloys. 193p. 1947. Wiley, New York, $3.50.

Production engineering & management, June 1948, p.93. ⅓ col.

"Divided into three sections. Principles of X-ray analysis, a field in which X-ray defraction has been applied to determine the crystal structures of metals and alloys and the arrangement of the crystals in a polycrystalline aggregate, are discussed in Part A. Part B describes and explains the physical properties of metal crystals, including the plastic properties. Properties of polycrystalline aggregates also are discussed. Changes in the properties of metals produced by alloying and heat treatment are explained in Part C."

Steel processing, June 1948, p.327. ⅔ col.

"Based on a series of lectures in physical metallurgy and . . . written essentially for metallurgists and chemists. The main principle of the book is that the properties and the arrangement of the crystals determine the properties of polycrystalline aggregates."

Breed, Robert S., and others. Bergey's manual of determinative bacteriology. Ed. 6, revised and reset. 1529p. 1948. Williams & Wilkins Co., Baltimore, $15.

Journal of the American Pharmaceutical Association, scientific edition, May 1948, p.214. ⅓ col.

"Completely re-set in a new double column format which permits more material on each page. Numerous changes have been made in the outline classification. Nearly 300 new species are described. In every instance new presentations were prepared by specialists, under the direction of the Editorial Board. A completely new feature is the Source and Habitat Index which should be of particular significance to all who are interested in determinative bacteriology. The Genus and Species Index has been brought up to date and includes synonyms and incompletely described species. The completion of this volume which has been more than four years in press represents a valuable contribution to the science of bacteriology."

Science, June 11, 1948, p.633. 1⅓ col.

"This . . . edition of the well-known manual, has been long in preparation and, according to the editors, represents more than the usual amount of time and effort. The active collaboration of specialists representing many diverse fields has added considerable authority to the taxonomic dicta presented . . . No longer merely a taxonomic key, in the newer sections of the book especially, it represents a compilation of facts quite encyclopedic in scope . . . Must be investigated by all who claim to be bacteriologists; and while it is primarily for them as specialists, it can be used with profit by all who have even a passing interest in microorganisms." *William S. Preston.*

Bryson, Lyman. Time for reason about radio; edited by William C. Ackerman. 127p. 1948. Stewart, New York, $2.

Broadcasting, May 3, 1948, p.71. ⅓ col.

"The general organization and philosophy of American radio is covered . . . Covers the subjects that listeners and those interested in the operation of radio most frequently ask about subjects that run the gamut from advertising to freedom and responsibilities of radio . . . Presents the problems and potentialities of radio as broadcasters themselves see them as well as the criticism and opinions of people outside the industry. All exact information has been brought up to date in footnotes and editor's notes."

Buchan, S. Rubber to metal bonding. 239p. 1948. Lockwood, London, 21s. net.

India rubber journal, May 8, 1948, p.5. ⅔ col.

"A first-rate survey of the practical end of the job—the thorough cleansing treatments; the brass plating plant, its control, and use; the rubber compounding angle; the practical processing, moulding, and operating stages. There is a very good section, too, on the various other bonding methods involving bonding cements . . . From the point of view of how to get the best out of existing methods, how to act at every detailed step, the book is an excellent example of rubber technology. From a fundamental point of view, some sense of disappointment must be felt, for inspite of a very good review of bond mechanism speculations, and a discussion of bond properties and nature, no satisfying picture is put before the reader . . . due to the unsolved complexities surrounding the subject . . . Provided with a good index, and a bibliography, which suggest between them some notable omissions."

Butterworth, B. Bricks and modern research. 160p. 1948. Lockwood, London, 10s. 6d.

Claycraft, May 1948, p.351. 2 col. including an illustration.

"Written by a well known research chemist to show how large an amount of scientific knowledge about the properties of clays and bricks is now available to brick manufacturers and others. The author also indicates some other possibilities and future developments. The author writes in a clear style and does not hesitate to be very frank . . . Easy to read and . . . beautifully illustrated . . . Should be read by every brick manufacturer and every manager and foreman in brickworks as well as by the younger men who aspire to higher positions in the industry. Even if they feel that they do not fully understand all they read they will readily grasp the book as a whole and will then realize something of the importance of research and other scientific work to the present and future welfare of the industry." *A. B. S.*

Cady, Edwin Laird. Precision investment castings. 356p. 1948. Reinhold, New York, $6.

Materials & methods, May 1948, p.168. ⅓ col.

"The answers to virtually every practical question about precision castings are found in this volume, which presents a thorough and comprehensive report on the advantages and limitations of the process and product, how to design parts for this process, and the best fields of application. Precision castings are compared with sand castings, die castings, machined parts, powder metallurgy products, forgings, etc. from several points of view. Materials, shapes and finishes are analyzed, and details of the process itself—patterns, molds, investment materials, shrinkages and expansions, and the casting operations and equipment employed—are described . . . The first and so far the only technical book to be published on these important new industrial products."

Modern machine shop, May 1948, p.346. ⅔ col.

"The first few chapters . . . should serve to tell the engineer what precision investment casting is, what it does, and how it does it. The remaining chapters go on to explain to the engineer what must be done in product design and redesign in order to obtain the best results from precision investment casting and how the process can be operated to obtain the desired ends. The resources and weaknesses of the process are described, the predictable lines of its future development are clearly indicated, and the practical methods by which the process may be operated on a sound basis are analyzed."

Clark, Austin H. Animals alive. 472p. 1948. Van Nostrand, New York, $4.

Science, May 14, 1948, p.528. ¾ col.

"From a broad background of personal experience, wide professional contacts, and intimate familiarity with the literature, Dr. Clark has compiled a fascinating volume of simple, direct description and narration. Although it was written for the nonprofessional reader, the technical scientist will here find many fresh facts sandwiched between familiar observations on habits, distribution, and habitats of a vast array of animal forms. Food habits are treated in a particularly appealing manner, as are the chapters devoted to man in his relations to the rest of nature. Domestication of animals as an influence on human culture and on history is dealt with in some detail . . . A distinctively worth-while contribution to a wider general appreciation of 'animals alive'." *Harley J. Van Cleave.*

Clark, M. Mansfield. Topics in physical chemistry; a supplementary text for students of medicine. 738p. 1948. Williams & Wilkins Co., Baltimore, $10.

Science, May 14, 1948, p.519. 1⅓ col.

"Shows the mark of an experienced teacher of biochemistry in a medical school, whose personal interest is especially inclined to the physicochemical aspects, and whose own line of research is not so much concerned with new discoveries, such as new vitamins or enzymes, which have to wait for a rational understanding, as with the advancement of his science by the application and extension of acknowledged fundamental principles of physics and chemistry under the guidance of both a clear ideology and a scrupulously devised technique . . . It will indeed be a good investment of leisure hours for a medical student, not only while at medical school but even more so thereafter, to study this book chapter by chapter—for study, he must; it is no easy reading matter. He will learn something both from those chapters which try to inculcate the fundamentals and from those representing just impressionistic sketches, and he will find the satisfaction, from his standpoint as a medical man, that at all times the application of the particular topic to physiological and clinical problems is emphasized." *L. Michaelis.*

Clippinger, Donald R. Manual of quantitative analysis. 339p. 1947. Ginn, Boston, $3.50.

Journal of chemical education, June 1948, p.359. 11 l.

"This excellent loose-leaf manual includes not only the conventional material found in an elementary textbook of quantitative analysis but also directions and model report blanks for 59 experiments. Some of the older time-consuming experiments have been eliminated but the substitutes make up for them . . . The theoretical part is well done and sufficiently complete for a book of this type. My only criticism would be that there should be more problems involving numerical answers—and an index." *S. B. Arenson.*

Crane, M. B., & Lawrence, W. J. C. Genetics of garden plants. Ed.3, revised and enlarged. 299p. 1947. Macmillan, New York, $3.50.

Science, May 14, 1948, p.526. ⅔ col.

"Has 11 additional pages of text and one new chapter which assembles the discussion of zenia and metazenia. Otherwise, the scope and the topics treated are the same as in the second edition. There is some revision to include information obtained in the extensive researches of the years since 1938 . . . [The authors] present information of both scientific and practical value in a manner that will interest a wide circle of persons who grow plants, such as gardeners, orchardists, and seedsmen, as well as the more technically trained horticulturists and plant breeders . . . In its particular scope and method of treatment this volume has no counterpart." *A. B. Stout.*

Crank, J. The differential analyser. 137p. 1948. Longmans, New York, 10s. 6d. net.

Research, May 1948, p.374. ⅔ col.

"The differential analyser deals mainly with the numerical solution of ordinary differential equations and the examples given in this book will interest the applied mathematician, physicist, chemist and engineer. The author has set himself the task of supplying to the potential user both the necessary technical knowledge and the mathematical background . . . The author has carried out the difficult task of writing a pioneer book with considerable success, and it will interest the general reader, the instrument engineer and, above all, the research scientist." *M. Bridger.*

Dalla Valle, Joseph M. Micromeritics; the technology of fine particles. Ed.2. 555p. 1948. Pitman, New York, $8.50.

Chemical and engineering news, July 12, 1948, p.2089. ⅘ col.

"It is evident that the author hopes this subject will be established in engineering train-

ing so that the young engineers may be fully familiar with it when they reach the field. The subject matter will be of particular interest to engineering students dealing with industrial hygiene, industrial engineering, and civil engineering; the fundamentals will have a place for those having contact with the subject in mechanical engineering, chemical engineering, and metallurgical engineering." *Lincoln T. Work.*

General Electric review, May 1948, p.56. ½ col.

"Contains additional chapters on the diffusion of particles, surface phenomena, smoke and dust clouds, and the theory of sampling . . . The treatment of dust and separation of particulate matter from air is especially complete and should be of interest to those in the field of air conditioning. The book is primarily a development of the principles of particulate matter. The direction of practice is indicated and numerous tables of useful data are included, but it can hardly be expected to serve as a handbook of procedure in any particular application. The author has the happy knack of introducing each subject with clarity and with references to specific examples. The reader may be lulled into a false sense of security to find himself in the middle of a rapidly developed mathematical treatment. The fifteen-page chapter on particles under pressure contains no less than thirty-eight equations. On the whole, however, the material is logically presented, the symbols are clearly chosen, and illustrations are used liberally. Illustrative problems follow each chapter." *Callaway Brown.*

Rock products, May 1948, p.57. 2½ col.

"A subject that concerns practically all the rock products industries . . . While the book undoubtedly contains a great deal more mathematics than the average technical man in the rock products industry can grasp without going back to his college textbooks, there is . . . much of very practical value sandwiched in between formulas of algebra and calculus. We cannot conceive of anyone engaged in research in the rock products industry not having this volume in his reference library." *Nathan C. Rockwood.*

Dameshek, William. See Hill, Joseph M., & Dameshek, William, ed.

Darnell, Joseph Roy. Boiler fireman's handbook. 193p. 1948. Technical Pub. Co., 53 W. Jackson Blvd., Chicago, $3.

Combustion, May 1948, p.53. ⅜ col.

"A practical treatment of the many problems encountered in boiler plant operation, much of the subject matter having been published serially in *Power Plant Engineering* during the period 1944-1946 . . . Obviously, in a book of less than 200 pages the . . . wide range of subjects cannot be accorded detailed consideration, but it is believed that enough is given to provide the operating man an insight into many of the problems involved."

Industry and power, June 1948, p.110, 112. ¼ col.

"Provides power plant engineers and boiler firemen with data for solving many of their combustion problems. Many suggestions are offered for the successful operation of various power house equipment, such as temperature and gas analyzing instruments, draft gages, air preheaters, stokers, oil, gas and pulverized fuel burners, forced and induced draft fans, feedwater heaters, and economizers. The text begins with a review of the fundamentals of combustion to familiarize boiler operators with the terminology used in combustion and temperature calculations appearing in subsequent chapters which offer specific calculations in combustion problems involving solid, liquid and gaseous fuels."

Davis, Harry M. Energy unlimited; the electron and atom in everyday life. 273p. 1947. Rinehart, New York, $4. (Murray Hill Bks.)

Chemical and engineering news, April 26, 1948, p.1247. ⅜ col.

"A survey of the working applications of the science of electronics and makes conservative estimates of future developments . . . Among the 17 chapter subjects are the electron microscope, radar, electronic navigation, television, atomic bombs, and radioactive isotopes. The subjects are treated reliably and informatively but with a superficiality that would not tax a high school pupil's knowledge of science. For the young student and for the general reader, 'Energy Unlimited' is recommended as a dependable and readable report on electronics today. There are over 100 excellent photographs." *T. L. Rettger.*

School science and mathematics, June 1948, p.499. 10 l.

"A book for the science teacher and alert man or woman who wants to know about the new things in science . . . Clearly written in language easily understood by one with an ordinary education . . . Well illustrated by pictures of scientists and their work. Forty-eight full pages of illustrations with good description are grouped in three sections. The chapters are short and each is a complete story so that one may begin reading any place in the book." *G. W. W.*

Scientific monthly, June 1948, p.528. 1 col.

"Taking advantage of his many on-the-scene contacts with scientists and their laboratories, the author describes and interprets many recent discoveries and inventions in nuclear physics and electronics with numerous applications of today and some possible applications of tomorrow . . . Although necessary technical terms are used, the book is on the whole clearly written, in non-technical language, and is intended for the better-than-average reader. The facts presented are unusually accurate, and even the theoretical explanations—although frequently anthropomorphic—are only occasionally misleading. However, even to the 'alert reader' . . . to whom the book is addressed, the content is by no means light reading." *Kenichi Watanabe.*

Dean, Robert B. Modern colloids; an introduction to the physical chemistry of large molecules and small particles. 303p. 1948. Van Nostrand, New York, $3.75.

Journal of the American Chemical Society, May 1948, p.1987. ⅜ col.

"According to the author, colloid chemistry had fallen into bad repute, but much of the deadwood is being cleared away. The reviewer doubts that this book will assist in this process of rejuvenation . . . The author deserves credit for his enthusiasm and for his desire to stimulate the interest of others in the multifarious colloidal phenomena in such diverse fields as chemistry, biology, medicine and agriculture.

It would be risky, however, to depend upon this book for an introduction to the behavior of colloidal materials, because it disregards many basic phenomena characteristic of this state of matter or offers inadequate explanations; and its organization will confuse the reader more than it will enlighten him." *Ernst A. Hauser.*

Soil science, May 1948, p.427. 12 l.

"The author's purpose is that of introducing the student to the subject of colloidal behavior. The material is presented in an especially lucid form, with excellent supporting illustrations. The several chapters deal with methods for determining size and shape of colloidal particles, liquid surfaces, adsorption, high polymers, plastics, resins and rubbers, carbohydrates and proteins, colloidal ions, emulsions and foams, hydrous oxides and silicates, and lyophobic colloids or suspensoids. A short list of selected references is presented at the end of each chapter, and more specific references are given at the bottoms of the pages. At the end of the book is a list of 133 questions dealing with the material covered. The appendix lists the symbols, constants, and Greek letters employed."

Eilers, H., and others. Chemical and physical investigations on dairy products. 218p. 1947. Elsevier, New York, $4. (Monographs on the progress of research in Holland.)

Chemical and engineering news, May 3, 1948, p.1314. ⅔ col.

"The authors have selectively reviewed the prewar literature, and their experimental contributions are of a fundamental nature. In some cases the work reported parallel work done in this country during the war. The conclusions drawn are in general agreement with the thinking of American dairy scientists, but the latter will find many thought-provoking ideas in the treatment of the various subjects . . . Should be studied by all those interested in fundamental dairy research, and it will be of more than passing interest to those concerned with the chemical and physical problems of dairy products manufacturing." *George E. Holm.*

Follis, Richard H. Pathology of nutritional disease. 291p. 1948. C. C. Thomas, Springfield, Ill., $6.75.

Journal of the American Dietetic Association, May 1948, p.436. ⅓ col.

"Presents the pathological effects that occur in mammalia when there are deficiencies of the essential elements—the essential amino acids, the fat- and water-soluble vitamins, and the essential fatty acids. In addition, there is a short historical introduction and presentation of biochemical relationships for each essential nutrient . . . The author . . . has done a fine job in the organization and presentation of the subject matter. The many excellent photographs and the larger number of bibliographical references make this book a valuable tool to the therapeutic dietitian, nutritionist, and biochemist as well as the pathologist." *Dorothy Ann Ehmke.*

Fonda, Gorton R., & Seitz, Frederick, ed. Preparation and characteristics of solid luminescent materials. 459p. 1948. Wiley, New York, $5.

Canadian chemistry and process industries, May 1948, p.459. ⅓ col.

"The outcome of a conference on luminescence held at Cornell University in October 1946. The text, including twenty-nine papers by leading engineers and scientists in the field of luminescence provides a general survey of the subject; the theory of various phenomena connected with luminescence; material on the purification, crystallization and constitution on luminescent materials; new information collected during the war years; a summary of the present status of luminescence; and suggestions and opinions which point the way toward further lines of investigation."

Foster, William, & Alyea, H. N. Introduction to general chemistry. Ed.3, revised. 801p. 1947. Van Nostrand, New York, $4.25.

Chemical and engineering news, June 7, 1948, p.1726. ⅞ col.

"New material added includes the atom bomb, wartime production of magnesium, wartime synthetic rubbers, the silicones, a long form of the periodic table, and a few other somewhat expanded topics. As the reviser states in the preface '. . . there has been considerable face lifting of the older edition' . . . The text is perhaps best suited for use by students who expect to major in chemistry and who will keep it for its value as a reference book." *M. L. Holt.*

Frocht, Max M. Photoelasticity. v.2. 505p. 1948. Wiley, New York, $10.

Steel processing, May 1948, p.275. ⅓ col.

"Can be divided into three parts. The first six chapters, comprising the first part, are a brief introduction to the theory of elasticity. This study is held by the author to be an essential background to the present study. Numerous problems are included. The second section continues the problems of the first part and lays emphasis on the methods for determining stress at isolated points, and the numerical solution of Laplace's equations, while the concluding five chapters are devoted to the theory, technique, and applications of three dimensional photoelasticity. When Volume I . . . was published in 1941, it was called by the various reviewers 'the finest technical book published in years'. Contributing factors were the content and its lucid presentation and the excellent line sketches, photographs, typography, etc. that graced it. This present work is as worthy of the title and should achieve the same status."

Gardam, G. E. German electroplating industry. 72p. 1948. Mapleton House, 5415 17th Ave., Brooklyn, $5.

Journal of the Electrochemical Society, May 1948, p.75*N*. 1⅓ col.

"Describes the companies and the kind of electroplating done before and during the war. There are brief comments on the plating techniques in comparison with United Kingdom methods and with methods in the U. S. A., as far as Dr. Gardam was acquainted with the latter . . . The American plater will find little in the way of new knowledge applicable to his industrial operations and techniques. The plating methods were mostly handled as proprietary or ready mixed solutions supplied by a few firms. Plating rate and methods were essentially the same as those in general use 10 to 20 years ago in America." *Charles L. Faust and W. H. Safranek.*

Gensamer, Maxwell, and others. Fracture of metals. 58p. American Welding Soc., New York, $1 unbound.

Foundry, May 1948, p.260. ⅝ col.

"This book is, with a few minor modifications, a report submitted to the Bureau of Ships of the U. S. Navy and is intended to provide means for engineers and designers to approach intelligently the problem of fracture. It is a summary of reviews of the literature and direct interviews with outstanding men in the field and represents a compilation of the present knowledge of the laws and fundamental mechanism of fracture."

Steel processing, April 1948, p.215. ½ col.

"Divided into two parts. Part I includes the original survey of the literature and an analysis of the theories of fracture and applications of principles, while Part II serves as a supplement in that it uses the framework established in Part I to clarify new developments in the theories of fracture and plastic flow. In addition to the extensive bibliography of approximately 300 references, a recommended research program is outlined."

Goldman, Stanford. Frequency analysis, modulation and noise. 434p. 1948. McGraw, New York, $6. (Radio communication series.)

Electrical world, June 5, 1948, p.222. ⅛ col.

"The opening half is devoted to the Fourier Series analysis of wave forms including the technique of modulation (amplitude, frequency and phase). Incidentally it explains how the hybrid procedure of FM broadcasting renders the reception comparatively free of noise. The second half analyses the sources of radio noise within and without the receiver and ways of diagnosing and correcting the intrusions. Appendices carry tables of integrals, trigonometric identities, Bessel and Fourier functions."

Gortner, Willis A., and others. Principles of food freezing; edited by L. A. Maynard. 281p. 1948. Wiley, New York, $3.75.

Food industries, July 1948, p.195. ½ col.

"Perhaps most of the difficulties so far encountered in the production of frozen foods can be traced to the failure to recognize the basic principles, even though the technical details have appeared from time to time in the literature. This book outlines most of those principles and their appearance in one volume should be most welcome."

Forecast, May 1948, p.49. ½ col.

"Dr. Willis Gartner [sic] covers the biochemical and nutritional aspects of food processing. Dr. Frederick S. Erdman explains the engineering side of the picture and describes the operation of the equipment involved. Questions concerning frozen food acceptance and users' specifications for equipment are discussed by Nancy K. Masterman, research associate . . . Organized into three parts: the product, frozen food; the consumer and his needs; and the engineering of food freezing. The basic principles applicable to the commercial processor or the homemaker freezing small amounts of food in her own kitchen are the fundamentals covered in this comprehensive book."

Goudsmit, S. A. **See Torrey, Henry C., & Whitmer, C. A.**

Gustafson, A. F. Using and managing soils. 420p. 1948. McGraw, New York, $2.80.

Fertilizer review, May-June 1948, p.19. ⅛ col.

"The author, professor of soil technology at Cornell University, has presented . . . basic information and practical suggestions on using and managing soils. The information will be of value to farmers, home gardeners and agricultural students. The fundamentals of soil conservation and improvement principles are set forth clearly . . . Those interested in soil management will find this book a valuable help."

Journal of soil and water conservation, April 1948, p.91. 1 col.

"The outstanding feature of the book is its 190 excellent illustrations. Anyone who picks it up is not likely to lay it down until he has leafed it through and studied what they illustrate . . . The pedologist will not be very happy about the book because it doesn't even mention such words as podzol, chernozem, and laterite, and one finds no reference to soil series. He does find, however, an excellent relief map of the United States, others showing the loess areas and those that were covered by glaciers, diagrams of soil profiles with good, medium, and poor drainage, and an outline map of the important crop areas . . . The author is to be congratulated on the technique employed to make the book attractive and interesting. The level of presentation is that of students in vocational agriculture." *Firman E. Bear.*

Soil science, May 1948, p.247. 10 l.

"The several chapters deal with getting acquainted with the soil, selecting land for farming and country living, tilling and managing crop soils, controlling water and soil erosion, managing acid and alkali soils, keeping up organic matter, conserving farm manures, growing green manures, selecting fertilizers, planning crop rotations, managing pasture, garden, fruit, and lawn soils, and keeping land productive over the years. The author is to be congratulated on leading the way in visual instruction."

Hage, Robert E. Jet propulsion in commercial air transportation. 91p. 1948. Princeton Univ. Press, Princeton, N. J., $1.50.

American aviation, June 1, 1948, p.46. ⅛ col.

"Every aeronautical engineer will be keenly interested in Mr. Hage's discussions of jet propulsion for transport aircraft . . . Comprises material given in the first series of Edwin G. Baetjer II Memorial Lectures at the School of Engineering, Princeton University. Mr. Hage concludes that turbojet transports are quite feasible at this stage of knowledge of jet power and presents an impressive array of data and graphs to support his views. He discusses basic power plant characteristics, basic aerodynamic characteristics, the case for the turbojet commercial transport, and supporting data."

Harrington, R. H. Modern metallurgy of alloys. 209p. 1948. Wiley, New York, $3.50.

Steel processing, June 1948, p.327. ½ col.

"Should be of interest to anyone who has any contact with metallurgy. Industrial research laboratories, 'works laboratories' and metallurgists generally will find a wealth of information here. The seasoned metallurgist will find that this book collimates all the stray in-

formation he possesses on physical properties, crystal structure, heat treating, and other 'whats' into ordered array through the logical presentation of the 'whys' of metallurgy. The student and investigators who find that they need a basic knowledge of this subject for related work, will find here a modernized, definitive system devoid of confusing terminology and replete with correlations between the theory and practice of metallurgy."

Hennessey, William J., & Atkin, W. W. Encyclopedia of home care and repair. 429p. 1948. Lantern Press, New York, $3.95.

Popular homecraft, May-June 1948, p.324. 12 l.

"Here, for the first time, is a home maintenance book prepared in true encyclopedic or dictionary form. Every item from Acoustic to Zoning is in its proper alphabetical position. Cross references help further to make this book a handy reference guide for every home. At the back are specially prepared charts enabling the home owner to keep accurate records of repairs, estimates, home costs, fuel consumption and other valuable information."

Henry, Darold J. California gem trails. 63p. 1948. Mineralogist Pub. Co., Portland, Ore., $1.50.

Earth science digest, June 1948, p.29. ⅓ col.

"This well-illustrated volume is concerned with a number of California mineral and gem localities, particularly those in southern California . . . Written in a light vein and makes pleasant reading for the collector planning a trip to this region. Excellent directions are given for reaching each locality, and 17 sketch maps made by the author help solve any difficulties encountered in reaching these places. Included among the areas described are Imperial County, San Diego County, Riverside County, San Bernardino County, Kern County, Ingo County, and Santa Barbara County."

Herrick, C. Judson. Brain of the tiger salamander. 409p. 1948. Univ. of Chicago Press, Chicago, $5.

Science, May 14, 1948, p.527. ⅔ col.

"This monumental work represents the culmination of 50 years of labor on the nervous systems of vertebrates. The author has not only amassed an enormous amount of data on the details of neurological structure in the salamander, but he has also laid a broad foundation for the comprehensive understanding of all vertebrate brains, with special emphasis on the origins of structural features and functional capacities of the human brain, and the general principles of their evolutionary development . . . The book has 300 pages of description and discussion and is divided into two parts which can be read independently of each other . . . The descriptive material is followed by 11 pages of bibliography and 70 pages of illustrations . . . Dr. Herrick's lucid style, obvious enthusiasm, and broad perception give this specialized text, particularly Part I, the rare quality of being both interesting and intriguing reading. The author has performed a signal service in so ably presenting the results of his life-long quest." *Walter A. Stultz.*

Hickinbottom, Wilfred John. Reactions of organic compounds. Ed.2. 481p. 1948. Longmans, New York, $6.

Chemical and engineering news, May 24, 1948, p.1550. ⅔ col.

"During the past 10 years the first edition . . . came to be highly regarded by graduate students and practicing organic chemists, as is attested by its having been reprinted four times. The new edition promises to be even more useful and popular, for it contains much additional material, covers new reactions, and evinces considerable rewriting where old procedures have been improved . . . The book is unique in that selected experimental procedures, given in well written detail, accompany and illustrate the textual material. Copious references are given, but in no case does one need to consult the original literature if he wishes to carry out an organic preparation. The examples are chosen so that they serve as models for the synthesis of related new substances. In general, the book is a most pleasing combination of classical organic theory with modern laboratory practice . . . Completely indexed." *C. F. Koelsch.*

Hill, Joseph M., & Dameshek, William, ed. Rh factor in the clinic and the laboratory. 192p. 1948. Grune, New York, $4.25.

Science, May 14, 1948, p.522. 1⅓ col.

"This special issue of *Blood, The Journal of Hematology,* contains articles on the Rh factor by 15 contributors. The papers were originally read at the International Hematology and Rh Conference in Dallas and Mexico City . . . Although there are certain regrettable commissions among the contributors to the volume, it stands in general as a fairly complete, up-to-date summary of the many facets of the important problem of blood incompatibility." *Laurence H. Snyder.*

Howard, Louise E. Earth's green carpet. 258p. 1947. Rodale Press, Emmaus, Pa., $3.

Frontiers, June 1948, p.157. ⅓ col.

"An instructive and sometimes moving book on soil exhaustion, based on a belief in renewal by natural processes . . . Actually a popular account of the ideas inspiring the author's late husband, Sir Albert Howard, once agricultural adviser to states in central India. It is acknowledged to belong to the school of organic farming which, while using what it will from the scientists, denies that farming is chemistry. A very readable book."

Huston, Ralph Chase. Correlation of some physical properties of alkanes and alkenes; boiling points, molecular volumes and surface tensions. 96p. 1947. Michigan State College Press, East Lansing, Mich., $1.75.

Chemical and engineering news, June 14, 1948, p.1800. ⅝ col.

"Presents a correlation of molecular structure to boiling points, molecular volumes, and surface tensions for the alkanes from the butanes to the octanes and for the alkenes from the butenes to the hexenes . . . Should be of interest to physical chemists who have specialized in the difficult field of correlation for hydrocarbons properties related to the liquid state." *Morton B. Epstein.*

Jackson, J. Hugh. The comptroller; his functions and organization. 97p. 1948.

Harvard Univ. Press, Cambridge, Mass., $2.

N.A.C.A. bulletin, May 15, 1948, *section 2,* p.1173. ½ p.

"Originally given as the 1946-1947 Dickinson Lectures at Harvard Graduate School of Business Administration, the four chapters in this book report much factual data on the development and place of comptrollership . . . accumulated over a period of time by the author who is professor of accounting and dean of the Graduate School of Business, Stanford University. Historical background of the office, its functions, organization of business to realize these functions, and personal qualities appropriate to their exercise, are covered. Appendix II includes twelve organization charts of comptroller's departments in prominent corporations in which effective application of comptrollership has been made."

New York certified public accountant, June 1948, p.476. ½ col.

"Dean Jackson . . . presents a discussion of the Comptrollership in American business corporations—his functions, the generally recognized organization of his office, and the personal qualities that make for his greatest success. The discussion . . . is illustrated by actual examples taken from the practices of many of the larger corporate enterprises."

James, Thomas H., **& Higgins,** G. C. **Fundamentals of photographic theory. 286p. 1948. Wiley, New York, $3.50.**

Chemical and engineering news, May 31, 1948, p.1656. 1 col.

"Its intention is to teach the fundamentals at the level of the person with a working knowledge of chemistry and physics. Both men are eminently capable photographic scientists with a record of original contributions; hence they can write with authority. It is a small book, which means that only the essentials are presented. Thus, a bird's eye view of the entire field of black and white photography is shown the reader, distinct and clear, free from the confusing indefinition of minute detail. In this respect the present book is an excellent introduction to the more detailed and advanced test [sic] by Dr. Mees, 'The Theory of the Photographic Process,' or to original papers by photographic technicians . . . Should have a wide appeal to the chemist and physicist who desires to see how his field of endeavor is utilized in the photographic process . . . Should also appeal to those scientists who use photography as a tool in their research programs." *Joseph S. Friedman.*

Journal of chemical education, June 1948, p.359. ½ col.

"A treatment of the fundamental theory of photography. The historic side is scarcely mentioned. The references, many of them recent, extend the presentation but do not pretend to make a complete bibliography . . . Not a book for light reading but it is well written, interesting, and rewarding. Briefly and clearly it presents the theory of black and white photography in about one-fourth the space used by Mees and bridges the interval since the larger book was published." *James C. McCullough.*

Jefferson, Josephine. **Wheeling glass. 86p. 1948. Guide Pub. Co., Mount Vernon, Ohio, $3.**

China, glass and decorative accessories, May 1948, p.31. 10 l.

"The story of an industry's strong influence upon the progress of an American city has been dramatically told . . . Dedicating her work to 'the glassmen of early Wheeling,' some of whom first settled in the city in 1769, Mrs. Jefferson has condensed a 179-year history into 86 pages of colorful narration, complemented by several illustrations of glass pieces, clearly reflecting a tradition which still persists in the American glassware industry."

Johnson, Arnold W. **Advanced accounting. 499p. 1948. Rinehart, New York, $5.**

New York certified public accountant, May 1948, p.401. 2⅔ col.

"In this text, which supplements two others by the same author on Elementary Accounting and Intermediate Accounting, twelve subjects are covered in eighteen chapters. For the most part, problem material is used to illustrate the points under discussion . . . The book is well organized from a teaching viewpoint. Ample practice material is made available, the text containing over 200 supplemental problems." *Edward J. Koestler.*

Johnstone, Rutherford T. **Occupational medicine and industrial hygiene. 604p. 1948. Mosby, St. Louis, $10.**

Hygeia, June 1948, p.451. 1⅓ col.

"Designed, produced and geared to the present-day needs of the industrial physician and general practitioner engaged in industrial medical practice. Industrial hygienists, industrial health officers, nurses, students and others concerned with the many branches of occupational medicine and industrial hygiene will also be attracted to this most extraordinary source of practical information . . . Vividly reflects the unique and extensive experience of the author. Practical data from every important phase of the field are presented in well written, clear, decisive and constructive manner." *Harold R. Hennessy.*

Jones, E. J. H. **Production engineering. Ed.5. 324p. 1948. Newnes, London, 17s. 6d. net.**

Mechanical world, April 9, 1948, p.411. 1⅓ col.

"Production engineering today covers so extensive a field that it is obviously impossible adequately to include within the compass of a single volume all that should be known in connection with the necessary jig and tool design. Here, however, the ground has at least been carefully surveyed, the strategic plans revealed and the appropriate tactics for the unending battle for production clearly set forth. That this book should have attained a fifth edition, and also be recommended by so eminent a body as the Institute of Production Engineers, is adequate proof of its very high standard . . . Definitely a book for tool designers and machine shop men, written in their own language by an expert, and it is in essence a very able approach to an immense subject." *E. S.*

Kempner, Stanley. **Television encyclopedia. 415p. 1948. Fairchild, New York, $6.50.**

Radio maintenance, May 1948, p.43. ¼ col.

"Contains a great deal of valuable and generally unavailable information about television . . . Divided into three parts. Parts One and

Two, 'Milestones to Present Day Television,' and 'Pioneers and Contemporaries in Television,' constitute an excellent history of the subject arranged for easy reference. Part Three, 'Television's Technical Vocabulary' does an excellent job of living up to its title . . . Will prove useful to everyone in the television field."

Radio news, June 1948, p.96. ½ col.

"Non-technical reference book covering all of the major aspects of video . . . Illustrated with historic as well as contemporary photographs. RADIO NEWS' readers who have enjoyed his articles on television will find the same clarity of presentation in Mr. Kempner's full length treatise on video."

Televiser, May 17, 1948, p.44. ⅝ col.

"The book, which is factual without being dry, gives pertinent facts and detailed information which includes a large television vocabulary of technical and non-technical terms, biographical sketches of past and present television pioneers, technicians and programmers . . . The first such attempt to compile the many fascinating facts about the sure and steady growth of television. A good reference book for researchers, students, those active in the field and busy executives." *Peter Strand.*

Kern, Frank D. Essentials of plant biology. pt.1: Manifestation of life; pt.2: Perpetuation of life. 441p. 1947. Harper, New York, $4.

Frontiers, June 1948, p.156. 1⅛ col.

"Although there is no dearth of good textbooks on general botany, the need has long existed for a volume suitable for a concentrated course such as is offered in a single term at many institutions. Dr. Kern, who is Professor of Botany and Dean of the Graduate School at Pennsylvania State College, is eminently qualified to write such a book and students of botany owe him a debt for having undertaken its preparation. The volume is divided into two parts, headed respectively, The Manifestation of Life and The Perpetuation of Life . . . The author is to be congratulated for the generally high standard of the illustrations which include many fine half-tones, several colored plates and an unusually high percentage of refreshingly new line drawings." *John M. Fogg, jr.*

Pennsylvania science news-letter, May 1948, p.4. ¾ col.

"Part I is devoted to the essential facts and principles necessary for understanding, the life, development, relations, and uses of plants and to emphasize the unity of plant life. Part II is concerned with racial preservation of plant life. The approach is functional rather than structural with enough of the structural side given to explain the processes and principles involved. The text was designed . . . for the semester course in botany . . . The arrangement and treatment of the material should make the text an unusually useful one. The author displays a happy faculty in selecting facts to illustrate botanical principles. In addition, the book is skillfully written to arouse the interest of the student."

Science, May 14, 1948, p.525. ⅔ col.

"Designed for a one-semester course in elementary botany. The book employs a functional approach, yet presents basic botanical concepts in a progressive sequence which enables beginning students to obtain readily a clear understanding of the unity of plant life . . . The author's style of presentation provides unusual clarity and interest for student readers. The author has achieved readability without sacrifice of scientific accuracy by minimizing the use of technical terminology and introducing it with care. Student interest has been attained by good organization, choice of interesting content, good illustrations, and diversity of references to practical applications of principles. The book is quite different from most of its kind, and for a one-semester text it gives the reader an exceptionally thorough grasp of plant science and its importance in modern life. The 16-page index is very complete and greatly facilitates reference use of the text . . . The excellence of content and style . . . will appeal to students and instructors." *W. F. Loehwing.*

Killeffer, David H. The genius of industrial research. 263p. 1948. Reinhold, New York, $4.50.

Oil and gas journal, May 27, 1948, p.87. ⅛ col.

"This treatment of modern industrial research and its methods is intended primarily to guide the ambitious young researcher to a better understanding and a surer mastery of his craft. The material presented is mostly from the field of industrial chemistry. The fascinating accounts of how many important modern developments were achieved are quoted directly from original presentations of those responsible —a method adopted to give the reader a clear insight into the reasoning behind these researches. The point of view throughout is that of the individual researcher and not that of management or direction. Described at length are the research methods which produced high-octane gasoline, the gas-filled tungsten-filament electric lamp, celluloid, the first synthetic plastic, and many others."

Kittredge, Joseph. Forest influences; the effects of woody vegetation on climate, water, and soil, with applications to the conservation of water and the control of floods and erosion. 394p. 1948. McGraw, New York, $4.50.

Soil science, May 1948, p.426. 11 l.

"The several chapters deal with climatic, soil, physiographic and forest regions, vegetation, light, temperature, wind, moisture, precipitation, interception, fog drip, evaporation, snow, soil relationships, transpiration, runoff, floods, erosion and its control, and watershed management. This book is of special interest in relation to the control of water. The chapter on vegetation for erosion control is an exceptionally good one in that it gives lists of trees, shrubs and vines, and grasses and herbs that can be used to best advantage for stabilization of banks and gullies, depending upon in which of the 17 natural-vegetation regions the area is located."

Wood, May 1948, p.135. ½ col.

"This volume on the effects of woody vegetation on climate, water and soil cannot fail . . . to have a strong appeal to foresters and administrators responsible for soil conservation and the prevention of erosion. The author . . . has obviously kept closely in touch with the investigations which have been in progress in the United States during the past two generations, besides having access to many papers in scientific publications of which others, less favour-

ably placed, have never heard. The list of references, which includes 381 items, is proof that he has made full use of his opportunities. The vast amount of information he has gained is now made available in this carefully planned work which is a most welcome contribution to the literature of the subject. Obviously much of the information is drawn from American sources but the work has not suffered on this account." *H. A.*

Kohler, E. L. Auditing; an introduction, and illustrative audit. 252p. 1947. Prentice-Hall, New York, $8.

New York certified public accountant, May 1948, p.402. 1½ col.

"[The author] approaches the subject as a practical accountant, and takes the reader through the various stages of the audit, from the negotiation with the client to the rendering of the report, and even to the extent of discussing the billing for services rendered, including the average per diem rates charged by auditing firms . . . Contains helpful and practical suggestions as to the writing of reports and the preparation of financial statements. Auditors' comments, including examples of exceptions and qualifications, are also included. The text concludes with 31 pages of auditing questions, pertaining to the 15 chapters. The accompanying set of work papers, the Illustrative Audit, consisting of a separate volume in looseleaf form, is introduced by an explanation of the various work sheets and includes a 'permanent file,' as well as drafts of the auditor's reports to the management and to the stockholders. Although methods of indexing and contents of auditors' work papers are not standard, the reader should obtain a working knowledge of what a set of accountants' audit papers should contain." *David S. Siegel.*

Kraus, Edward H., & Slawson, C. B. Gems and gem materials. Ed.5, reset. 332p. 1947. McGraw, New York, $4.

Mine & quarry engineering, June 1948, p.190. ½ col.

"In the earlier editions the emphasis was and still is on gemstones for ornamental and decorative purposes, but the present edition quite rightly follows the trend of the utilisation of gemstones in industry. This trend had, of course, been evident for a number of years, but the war increased its tempo by its demand for industrial diamonds, synthetic rubies and sapphires, piezo-electric quartz, etc. . . The changes relate to crystal forms, physical and optical properties of gems, gem polishing and cutting, and manufactured gems. A new concise and easily understood section on X-ray analysis and crystal structure has also been incorporated in the present edition."

Lawshe, Charles H., jr. Principles of personnel testing. 227p. 1948. McGraw, New York, $3.50. (McGraw-Hill industrial organization and management series.)

American business, May 1948, p.66. ½ col.

"Packed with carefully documented cases designed to prove that it pays to use tests in determining the value of employees . . . The author delves into the principles of personnel testing, methods for analyzing and presenting facts, telling how to build different kinds of tests and what they may be expected to accomplish. Access to a large amount of factual material and wide experience to draw on gives the book a down-to-earth quality seldom found in books of this nature."

American machinist, June 17, 1948, p.194. ¼ col.

"Planned primarily for management building a policy framework for personnel testing, and for test administrators themselves, this book is essentially practice rather than theory. It is a summary of procedure, covering the basis for personnel testing, test selection, measures of job success, analysis and presentation of results . . . A useful, readily understandable and thorough treatment of a subject steadily increasing in importance."

Lewin, Philip. The back and its disorders. 157p. 1948. McGraw, New York, $2.50. (Whittlesey House publication.)

Ohio state medical journal, June 1948, p.571. ⅓ col.

"Here are 150 pages of highly informative material written so the average layman can understand."

Scientific monthly, June 1948, p.526. 1¼ col.

"Dr. Lewin explains concisely, for the nonprofessional person, the major causes of back pain . . . There is no one living who does not suffer from a backache at some time. Dr. Lewin has pointed out many causes of this in his book and has alluded to many others. He has explained the more common causes in language anyone can understand. The difficulty in reaching an active diagnosis—its why and wherefore—is described, and the methods by which a physician must reach his conclusion are given . . . Because of . . . newer knowledge of the back and its diseases, Dr. Lewin's book, written for the consumption of the general public, is very necessary. To find such an authoritative, enjoyable, and readable short book as this, about our own medical problems, is an unusual treat in the literature of today. May I suggest it as a must to physicians, medical students, nurses, and to you: the reading public?" *Milton C. Cobey.*

Lillie, R. D. Histopathologic technic. 300p. 1948. Blakiston, Philadelphia, $4.75.

Journal of industrial hygiene and toxicology, May 1948, p.208. 7 l.

"An excellent book on technics in histopathology and will be of considerable value to pathologists and toxicologists. Of especial interest to toxicologists are chapters on microscopy (Chapter 1) and identification of minerals in tissue sections (Chapter 13) . . . Written in the form of a manual for convenient reference." *Leslie Silverman.*

Science, May 14, 1948, p.523. ⅝ col.

"Commendably not an encyclopedic compilation of histologic and cytologic technical methods . . . Devoted, for the most part, to descriptions of methods which in the author's laboratory have been found to give consistent results . . . This treatise on histopathologic technic will satisfy a need long felt by many pathologists and histologists alike." *Kenneth M. Richter.*

Mahin, Edward G. Elementary physical metallurgy. 276p. 1948. Remsen Press, 26 Court St., Brooklyn, $6.

Combustion, May 1948, p.53. ¼ col.

"Starting with the microscope and the preparation of metallographic specimens, the text

takes up properties of materials, their relationship to one another, methods of testing and interpretation of the results. Such subjects as hardness, thermal analysis, pyrometry, crystal, space, lattice and phase diagrams are discussed at length . . . Adequately illustrated with reproductions of photomicrograms and diagrams."

Welding journal, May 1948, p.396. ⅓ col.

"An authoritative text for beginners in the study of metallurgy. The discussions of fundamental metallurgical facts and theories are developed in such fashion as to make the book valuable as a short course for mechanical, electrical, chemical and aeronautical engineers as well as an introductory text for majors in the metallurgy field. Special attention is given to fundamentals and care has been taken not to encumber the book with abstruse conceptions . . . Outstanding features of the book are the detailed treatments of hardness, thermal analysis, pyrometry and phase diagrams. The author succeeds in making these sections live enough to hold the interest of students and engineers alike."

Maynard, L. A. See Gortner, Willis A., and others.

Maytham, Thomas E. Introduction to advertising principles and practice. 404p. Harper, New York, $6.

Tide, June 18, 1948, p.25. ½ col.

"Generously illustrated with sample advertisements, charts and figures. It takes up the subject all the way from the theoretical side, with a chapter on 'Advertising's Place in Our Social Economy,' to the most practical hints on how to plan the advertisement, write headlines and copy, make layouts and deal with production problems. In addition, Maytham has prepared chapters on media selection with an analysis of the advantages and disadvantages of newspapers, magazines, radio, direct mail and display. Other material . . . includes information on marketing and market research, advertising testing, packaging, and product identification."

Milk Industry Foundation. Accounting manual for milk dealers. The Foundation, Chrysler Bldg., New York, $50 (Members, $25).

Milk plant monthly, May 1948, p.88. 1⅝ col. including an illustration.

"Fills the need of fluid milk distributors for a clearly presented, simplified guide to accounting principles and procedures of practical service in every phase of fluid milk industry operations . . . Acknowledged to be the latest and most complete job of its kind ever published . . . Provides the key to sound practical accounting, complete management information and is practical, flexible and easy to use. All important phases of all accounting problems are covered . . . Contains financial and cost accounting procedures completely illustrated through the use of a set of Exhibits which contain interlocking figures . . . Assists in the development of sound and practical cost accounting principles and . . . provides for sound cost application and analysis and thereby gives management a tool to be used for greater efficiency through complete knowledge of costs . . . Provides additional data on the current trend of accounting technique in the industry . . . Includes complete statements and forms—almost every form needed in a fluid milk business."

Miller, Jerome J. Your teeth, and how to keep them. 232p. 1947. Lantern Press, New York, $3.

Scientific monthly, June 1948, p.525. ½ col.

"The average person has little or no idea of what is being done in his mouth, and the dentist seldom has the time to go into detail about his work. Miller's book does this task for the dentist in an admirable fashion . . . Begins with a description of the dental apparatus and its relationship to the general health, and proceeds to evaluations of the techniques of full and partial restorations of teeth. Between these extremes, Dr. Miller deals with children's dentistry, orthodontia, tooth-filling materials and their relative merits, mouth infections, wisdom teeth, and a factual discussion of the value of dentrifices and the ballyhoo that goes with them . . . A must for the person who is really interested in his teeth and who wants to know the how and why of his dentistry rather than remain in ignorance of facts so vital to his welfare." *Richard K. Thompson.*

Milne-Thomson, Louis M. Theoretical aerodynamics. 363p. 1948. Macmillan, New York, 40s. net.

Mechanical world, April 30, 1948, p.488. ¾ col.

"For anyone with an adequate background of mathematical knowledge who wishes to make a thorough study of theoretical aerodynamics this book will prove a great boon. The subject is developed from careful definitions, and gives a general impression of clarity, neatness and logical sequence. There are 19 chapters, and all except one are followed by a number of examples . . . Some of these are easy and others appear to be difficult. No solutions to the exercises are given, which is a disadvantage for private study . . . A book for university students and all teachers of aerodynamics . . . Well written, excellently printed and produced, and will fulfil its function admirably." *J. J.*

Nature, May 8, 1948, p.703. ⅝ col.

"Almost wholly concerned with the theory of aerofoils and with the hydrodynamic basis. The subjects of viscosity and turbulence are not seriously discussed . . . Based on lectures to junior members of the Royal Corps of Naval Constructors, and it is stated . . . that general standard . . . is that of a first-year university course. This is certainly much too modest; but it is true to say that the book is so clearly and pleasantly written that it could be read with profit by a bright 'freshman' or even by an advanced schoolboy . . . The most comprehensive and up-to-date book extant on the theory of aerofoils in steady motion, and is a very welcome addition to the text-book literature of aerodynamics . . . Printing . . . is excellent." *W. J. Duncan.*

Montgomery, C. G. See Pound, Robert V.

Montgomery, D. D. See Pound, Robert V.

Morehouse, L. E., & Miller, A. T. Physiology of exercise. 353p. 1948. Mosby, St. Louis, $4.75.

Science counselor, June 1948, p.64. 11 l.

"A novel treatment of the physiology of exercise in that man is the subject of most of the experiments cited. The text includes a complete study of muscle physiology in all its ramifications. Only an elementary knowledge of some of the basic principles of chemistry and physics has been assumed on the part of the reader. The more technical terms are adequately defined at the time of usage. A glossary is appended . . . Written in a simple easy-to-read style and can be used to advantage as a supplementary text in the general course of physiology." *Alfred Halpern.*

Morgan, Alfred P. Tools and how to use them for woodworking and metal working. 352p. 1948. Crown, New York, $3.

Popular homecraft, May-June 1948, p.324. ⅛ col.

"A complete book, with full directions on the use of all up-to-date tools, clear guidance and instruction on proper methods, techniques, and care. The author tells you and *shows you* by means of over 600 step-by-step illustrations how to get the maximum usefulness and the best results from your tools with the least effort. He explains also which tools are best for each job. This practical, all-inclusive handbook is an essential for amateurs, and experienced carpenters, machinists, and metal workers who will find it a valuable, constantly useful reference book."

Morse, Edna C. College chemistry in nursing education. 260p. 1947. Macmillan, New York, $4.

Journal of chemical education, June 1948, p.359. 1 col.

"Examines a problem which faces all college teachers of general chemistry . . . Deals with the ability of the course to satisfy the needs of a particular vocational group, in this case prenursing school students. However, there are useful implications here for other groups because the author discusses such general topics as 'the liberal arts tradition versus vocational interests' and 'the attitude toward the vocational course' in college. The book should also have value for those engaged in planning prenursing college programs . . . The reviewer would like to recommend this book to all chemistry teachers who have student nurses in their classes. They will find its subject matter useful . . . Should find a place on the desk of any administrator who is concerned with curriculum planning for student nurses either in college or nursing school because the author summarizes in an unbiased fashion the needs of the students and the facilities available for their satisfaction." *Helen I. Miner.*

Newman, James R., & Miller, B. S. Control of atomic energy. 434p. 1948. McGraw, New York, $5. (Whittlesey House publication.)

Physics today, June 1948, p.18. 2 col.

"The first comprehensive work on the Atomic Energy Act of 1946. Mr. Newman . . . and Mr. Miller . . . have written a well organized annotation of the basic features of this remarkable statute. The introduction, the chapter on research, and the chapter on control of information, which together occupy more than a third of the text, present an illuminating essay on two of the deep issues with which the law is concerned—that of civil as against military administration and that of Government control of scientific activities. In the discussion of the technical features, or mechanics of the law, however, the book is less successful. Here the treatment is difficult and sometimes tedious . . . Atomic energy may be, as the President has said, 'a new force too revolutionary to consider in the framework of old ideas.' But Mr. Newman and Mr. Miller have managed to enliven the entire book with the wisdom of the past—to such an extent that one might compile from their unlimited fund of quotations his own Practical Cogitator for atomic energy." *Herbert S. Marks.*

Northey, Elmore H. Sulfonamides and allied compounds. 660p. 1948. Reinhold, New York, $15. (American Chemical Society. Monograph series.)

Science, May 14, 1948, p.521. 1⅛ col.

"Dr. Northey has presented a wealth of information in an interesting manner, and his book should be on the 'must' list as a ready reference for those biologists, pharmacologists, clinicians, chemists, and others engaged in, or wishing to undertake or become informed of, research on the sulfonamides." *Maurice L. Moore.*

Nystrom, Paul H., ed. Marketing handbook. 1321p. Ronald, New York, $7.50.

Journal of retailing, April 1948, p.87. 1 col.

"In its layout and arrangement, the book is ideally suited for reference use. Each section has a detailed index, and each topic within sections is given a bold-face heading. The treatment throughout is concise and definite. The absence of several important writers in the field of marketing may have been due to copyright restrictions." *Lawrence C. Lockley.*

Printers' ink, April 23, 1948, p.82. ⅓ col.

"Following the style and format of engineering manuals, this new publication attempts (and successfully) to put into compact, usable form the fundamental facts of marketing. The data come from a distinguished list of contributors and consulting editors (more than 60 in all); and for the 30 well-organized sections . . . a shorter list of editors is responsible . . . A remarkable little book! Judicious reading lists might have made it even more valuable."

Paschkis, Victor. Industrial electric furnaces and appliances. v.2: Resistance, induction and capacitance heating. 334p. 1948. Interscience Publishers, New York, $8.

Military engineer, July 1948, p.344. ⅜ col.

"A well written presentation of a subject of growing importance. Engineers in the field will welcome publication of the second volume of the text. A relatively new field, electric furnaces are widely used in many industries. Dr. Paschkis has classified the different designs in a systematic manner." *F. K.*

Steel processing, May 1948, p.275. ⅓ col.

"Covers a field of furnaces in which diversity in design is much more pronounced than in the field covered by the first volume . . . Divided into three chapters: Resistance Furnaces and Appliances, Induction and High Frequency Induction Heating, and Selection of Furnaces. This work is very comprehensive and presents the theory of furnace design and its practical aspects in such a manner as to enable the

reader to select furnaces for specific applications and under varying circumstances. It is directed to and useful to the furnace engineer, designer, and power sales engineer."

Pearl, Richard M. Popular gemology. 317p. 1948. Wiley, New York, $4.

Earth science digest, June 1948, p.28. 1½ col.

"The newest semi-technical book on the science of gems . . . Professor Pearl is a member of the geology department of Colorado College, and his book is written from the standpoint of a teacher, explaining the principles of gemology clearly and simply, without sacrifice of accuracy. Written since World War II, the locality information, production data, and uses of gems are up to date . . . There is a section on selected reading and an unusually comprehensive and painstaking index of about 3,000 entries. The illustrations number 115 photographs and drawings."

Pottenger, Francis Marion. Tuberculosis; a discussion of phthisiogenesis, immunology, pathologic physiology, diagnosis, and treatment. 597p. 1948. Mosby, St. Louis, $12.

Science, May 14, 1948, p.523. 1⅛ col.

"A timely synthesis of current clinical knowledge on human tuberculosis, a harmonious conception built from accepted facts and plausible hypotheses . . . We would recommend this book to the phthisiologist as a vade mecum; to the practicing physician as an easily readable treatise comprising the sum total of today's fundamental knowledge along with the most modern clinical guiding principles on tuberculosis; to the research worker and to the epidemiologist as an almost complete source of physiological, pathological, and clinical data, absolutely necessary for intelligently carrying on research on tuberculosis or organizing the fight against it with logical and coordinate planning. Such an important subject must not suffer from departmentalization. The magnitude of the problem calls for an equal magnitude in the study of the disease and the fight against it. A synthesis like Dr. Pottenger's is to be acknowledged as an invaluable contribution to that end." *Armand Frappier.*

Pound, Robert V. Microwave mixers; edited by C. G. Montgomery and D. D. Montgomery. 381p. 1948. McGraw, New York, $5.50. (M.I.T. radiation laboratory series, v.16.)

Electronics, June 1948, p.246. ⅔ col.

"The completeness of the text, its use of but lack of dependence on mathematics, the large number of practical design problems considered and the detailed drawings and data presented make this text very useful. Anyone desiring to know more about this field of microwave techniques would do well to read this book." *Joseph Kaufman.*

Review of scientific instruments, May 1948, p.363. 1⅛ col.

"In the present state of development of the microwave art, there appears to be little prospect that silicon crystal frequency converters will be supplanted by vacuum tubes. This book therefore assumes a position of importance in the field and should prove an invaluable guide to future developments." *C. F. Edwards.*

Science, May 28, 1948, p.579. ¾ col.

"Presents the first collected data of a new art—that of the conversion frequency problem for microwave frequencies. This is a subject that was newborn out of the recent war. Whereas some of the previous volumes of this series tend to present the broad phases of microwave systems in semitechnical form, this volume treats a specialized portion of the microwave picture and subjects it to microscopic scrutiny. The purpose of such a thorough analysis is to yield data on microwave mixers sufficiently complete for design purposes . . . Well written and concise. Because of the limited subject and the very specialized subject matter, it may be considered a valuable reference source rather than a text." *Gustave Shapiro.*

Wireless world, June 1948, p.216. 1¼ col.

"The book is not well written. It contains much needless repetition, and the subdivision of subject matter would merit considerable revision. The repetition, the mixing of subject matters, and the author's style of writing, make the book not easy to read . . . Describes only the American developments and does not refer to the British, which are quite their equal on crystals, valves, and waveguide circuits. Nevertheless, the experienced reader will be able to sort out for himself very useful references for his work. Because of the style of writing, however, the beginner in the subject will need to study the book carefully in order to grasp the salient features of the subject." *L. W. B.*

Richtmyer, F. K., & Kennard, E. H. Introduction to modern physics. Ed.4, revised. 759p. 1947. McGraw, New York, $6.

American journal of science, July 1948, p.453. ⅓ p.

"Brought up to date by the inclusion of some of the developments of the last five years. Between 50 and 60 pages of new material have been added principally dealing with nuclear physics and with cosmic radiation. The expansion of these chapters has been partially compensated by the omission of about 15 pages of older material which was mostly speculative . . . Will be welcomed by many teachers of physics." *C. G. Montgomery.*

Electronics, Aug. 1948, p.224. 1⅜ col.

"[Includes] a complete account of the development of the modern quantum theory, an enlarged chapter on nuclear physics and a new chapter on cosmic rays . . . Because of the tremendous volume of new material which has been added in the revised edition, adherence to the original style of exposition would have required at least twice the number of pages. It is, therefore, no fault of the author, but rather a characteristic of modern physics, that the new edition resembles a syllabus of important results more than it does an introduction for the uninitiated." *Thomas H. Johnson.*

Rider, John F., & Uslan, S. D. FM transmission and reception. 409p. 1948. John F. Rider, New York, $2.70.

Electronics, Aug. 1948, p.222, 224. ½ col.

"Represents a vast amount of material on f-m transmitters, including most of the commercial broadcast types, as well as examples of those used in amateur and police radio work . . . Some of the discussion material is confusing and occasionally terminated with incorrect conclusions . . . Assumes only a basic working knowledge of radio on the part of its readers, and is well illustrated with wiring diagrams and graphs." *Glenn H. Musselman.*

Radio-craft, June 1948, p.87. ⅛ col.

"The basic principles of wide- and narrow-band FM transmission and reception, antennas, and operation and design of FM equipment are covered in this book . . . Divided into two parts. The first covers theory of frequency and phase modulation, reactance tube modulators, a.f.c., frequency multiplication, and design characteristics of several commercial FM transmitters. FM antennas, tuners, and receivers are discussed in the second part. Each stage in the FM receiver is compared to its equivalent in an AM set. Four types of FM detectors are discussed in detail, including comparison of all types."

Radio news, May 1948, p.182. ⅔ col.

"Divided into two main sections dealing with FM transmission and FM reception. The authors have provided a detailed explanation of the equipment and techniques used in transmitting FM program material including transmitting antennas. While this material provides an excellent background for the all-around technician, servicemen will undoubtedly find the section dealing with FM receiving equipment of more immediate value . . . Servicemen will welcome the chapters dealing with the alignment and servicing of FM receivers . . . Since the inclusion of mathematics has been limited to the barest essentials, this book may be used by the student and for self-instruction."

Riley, Herbert Parkes. Introduction to genetics and cytogenetics. 596p. 1948. Wiley, New York, $5.

Science, June 11, 1948, p.634. ⅔ col.

"We have been asked at times to recommend a book on heredity for the average reader with little knowledge of biology. This book . . . seems to us perhaps the best we have seen for this purpose . . . Designed as an introductory text for students in genetics or for the average reader who wishes to know something of the laws of heredity and serves these two purposes admirably. The approach used . . . is the logical one rather than a more or less historical development of genetics . . . Excellent . . . well illustrated, and many of the illustrations are new. There are, however, a few minor corrections that might be made if there are to be extra printings." *W. Ralph Singleton.*

Ritt, Joseph Fels. Integration in finite terms; Liouville's theory of elementary methods. 100p. 1948. Columbia Univ. Press, New York, $2.75.

Science, May 14, 1948, p.512. ¾ col.

"The fascinating work of Liouville and his successors has been presented in a unified, rigorous and readable manner. The essential ideas have been stressed, and auxiliary information on analysis and algebra has been supplemented . . . Mathematicians should certainly be indebted to the author for this very valuable monograph on such a beautiful part of analysis which, although often quoted, has been known so far only to a few specialists." *Arthur Rosenthal.*

Rogers, Frances, & Beard, Alice. 5,000 years of glass. New edition. 314p. 1948. Lippincott, Philadelphia, $3.75.

China, glass and decorative accessories, May 1948, p.31. ¼ col.

"To cover industry development since 1937, the publishers have added new sections on uses of glass in radar screens, lenses, art forms and other modern applications. Trades-people will find this product of long and zestful research, an invaluable aid for the appreciation and understanding of the industry's contribution to the modern world."

Rosen, George, & Caspari-Rosen, Beate. 400 years of a doctor's life. 429p. 1947. Schuman, New York, $5.

Scientific monthly, May 1948, p.442. ⅝ col.

"Attempts to present, through autobiographic excerpts from more than eighty doctors, a composite picture of the medical man. The excerpts are arranged to represent a life-history sequence, with the following major headings (the number of excerpts for each section is given in parentheses): Early Years (11), School Days (8), The Medical Student (31), The Practice of Medicine (28), Scientist, Scholar, Teacher (22), The Doctor Marries (19), The Doctor as Patient (12), The Doctor Goes to War (15), Writing and Politics (6), and Reflections on Life and Death (9) . . . Should provide the established doctor with much pleasant browsing, the eager medical student with inspiration, and the patient—each of us at one time or another—with a frankly humanizing portrait of the man who often plays God." *George F. J. Lehner.*

Sahag, Leon Marr. Kinematics of machines. 249p. 1948. Ronald, New York, $4.

Modern machine shop, May 1948, p.342, 344. ½ col.

"The graphic method is applied to the solution of problems in velocities and accelerations. The arrangement of materials and the method of analysis used in each example are presented logically and in good sequence. In addition, the text contains somewhat advanced material that will be found useful by those who offer a complete course in kinematics. Problems that can be used for either homework or class recitation are provided at the end of each chapter."

Schultz, Leonard P., & Stern, E. M. The ways of fishes. 264p. 1948. Van Nostrand, New York, $4.

Natural history, May 1948, p.197. 1 col.

"The jacket states that *The Ways of Fishes* is one of a new group of books dealing with various fields of natural history, designed for the entertainment and information of the general reader. The authors of the series are members of the scientific staff of the Smithsonian Institution. Dr. Schultz says that his object in writing the book is 'to share with others who are not ichthyologists at least a little of the enjoyment my colleagues and I get out of knowing the bizarre, astonishing, and manifold ways of our favorite animals.' Much of the charm of this book lies in the author's world-wide, firsthand observations and his obvious pleasure in making them. Another stimulating feautre is the up-to-date descriptions of the large and small experiments, discoveries, and problems of Dr. Schultz's colleagues." *F. La Monte.*

Science, May 14, 1948, p.528. ⅔ col.

"The purpose of this book is to share with the uninitiated a little of the enjoyment which ichthyologists have in finding out the very diverse and often surprising or impressive manner of life of different fishes. Simply and enthusiastically written, it is well qualified to

interest one in the subject. Especially to be commended to the reader's attention are passages descriptive of the author's personal experiences with fishes in various parts of the world, and those of his friend and colleague, the late Hugh M. Smith . . . No attempt is made . . . to give a comprehensive picture of the behavior of fishes . . . This book as a whole, not only an appended classification of fishes, will have reference value on a serious naturalist's shelf as well as giving pleasure to the lay reader." *J. T. Nichols.*

Seitz, Frederick. See **Fonda, Gorton R., & Seitz, Frederick, ed.**

Shaw, R. W., & Boothroyd, S. L. Manual of astronomy. Ed.3. 294p. 1947. Appleton, New York, $3.

Sky and telescope, May 1948, p.182. 1 col.

"Contains 47 exercises, of which 22 require no equipment and no data other than that provided in the manual, and 25 require separate equipment ranging from working photographs to fairly elaborate spectroscopic equipment. The manual takes the student further into advanced astronomy than any others which have come to the attention of this reviewer . . . Should be useful to amateur astronomers as well as students, and particularly to those amateurs who would like to gain some additional insight into the work of professional astronomers without becoming involved in advanced mathematics." *Victor Goedicke.*

Sherrington, Charles. Integrative action of the nervous system. Ed.6, reset. 433p. 1948. Yale Univ. Press, New Haven, Conn., $6.

Science, June 4, 1948, p.606. 1 col.

"Entirely reset, the text being retained, but the figures, badly worn by the many reprintings, have been redrawn with commendable accuracy. Legends for figures have been recast, and many page headings are new, the latter sometimes with re-emphasis, possibly born from hindsight. A bibliography of Sir Charles's publications is a welcome and useful addition. Entirely unique to the new edition and the most important addition thereto is the foreword written by Sir Charles, in which he responds today to reflection on his writing of 40 years ago and to the work that has been done since, to no small extent by himself." *David P. C. Lloyd.*

Shostak, Arnold A. Preparing for federal radio operator examinations. 404p. 1948. Prentice-Hall, New York, $3.75.

Radio news, May 1948, p.182. ⅝ col.

"Concise and authoritative. Written by a former radio inspector for the Federal Communications Commission, this text is prepared in the familiar 'question and answer' form . . . Divided into six elements corresponding to the elements encountered in the FCC examinations . . . Admirably suited for home study by prospective licensees and applicants for a renewal of FCC licenses."

Silman, H. Chemical and electroplated finishes. 414p. Chapman & H., London, 30s. net.

Sheet metal industries, May 1948, p.942. ¾ col.

"This . . . is not just another handbook on electroplating; it is a critical survey of the whole field of chemical and electrochemical treatments . . . It is not the author's intention to provide full working details of each process, but sufficient information is given for any of the processes to be operated. Plant and equipment requirements are described in a manner likely to prove of great value to anyone contemplating the erection or extension of a plating line. The majority of the illustrations are good, but there are some which do not do justice to the subject matter . . . The text . . . is well annotated with references, and an appropriate bibliography appears at the end of each chapter." *J. B.*

Slurzberg, Morris, & Osterheld, William. Essentials of radio. 806p. 1948. McGraw, New York, $5.

Broadcasting, April 26, 1948, p.50. ⅓ col.

"Comprehensive study of the principles of operation of vacuum tubes, their basic circuits, and the application of these circuits to low frequency radio receivers is contained in *Essentials of Radio,* which treats the subject at an intermediate level as distinguished from the advanced level or the elementary level with little mathematics involved. All recent advances of major importance are presented, including those dealing with frequency modulation and modern testing equipment. All electronic circuit actions are analyzed mathematically and physically on the comprehension level of the man having a basic understanding of radio."

Electronics, Aug. 1948, p.226. 1 col.

"Examples are used liberally . . . to illustrate equations and procedures. Each chapter is followed by a bibliography, an average of about fifty questions, and an average of about forty problems. An eighteen-section appendix provides sufficient reference data so that all problems may be solved without resort to other books. The authors are to be commended for their use of standard ASA symbols throughout." *J. M.*

Radio & television news, Aug. 1948, p.130. ⅝ col.

"Provides the much-needed bridge between elementary radio texts and books of the engineering level. The authors have presented a comprehensive study of the principles of operation of vacuum tubes, their basic circuits, and the application of these circuits to low frequency radio receivers. For persons studying radio by self-instruction or the student in trade or vocational schools or junior colleges, this text will be of assistance inasmuch as a minimum knowledge of mathematics is prerequisite and the use of the equations and vectors which appear in the text is fully explained . . . Clearly and simply presented and the student should experience no difficulty in grasping the subject matter. The lavish use of illustrative material helps to further clarify the subject under discussion . . . Enthusiastically recommended as a home-study text."

Smith, Harris P. Farm machinery and equipment. Ed.3, rewritten. 520p. 1948. McGraw, New York, $5. (McGraw-Hill publications in agricultural engineering.)

Agricultural engineering, April 1948, p.180. ⅛ col.

"Almost completely rewritten to cover machines and machine elements now in use or coming into use, and to eliminate material on older models rapidly disappearing from general use. Chapters in the current edition are grouped into 17 parts covering importance of farm

machinery to agriculture, principles of farm machinery, soil preparation machinery, seedbed preparation machinery, seeding machinery, cultivating machinery, dusting and spraying machinery, harvesting machinery, seed preparation machinery, feed preparation machinery, fertilizing machinery, transportation equipment, cleaning and grading machinery, soil and water conservation machinery, labor saving equipment, pasture machinery, and economics of farm machinery."

Snell, Foster Dee, & Snell, C. T. Colorimetric methods of analysis. Ed.3. v.1: Theory, instruments, pH. 239p. 1948. Van Nostrand, New York, $4.50.

Petroleum processing, May 1948, p.509. ⅝ col.

"Both the scope and the size of the book have been increased, although much condensation was necessary. Many of the older references from the second edition were deleted. Description of new equipment designs has been limited to the commercially more important types. The text itself has been expanded from two to three volumes . . . Vols. II and III to follow will cover inorganic and organic applications. The present volume includes data and methods on the various phases of photometry, fluorometry, hydrogen-ion, nephelometry, and turbidimetry, along with chapters on the theory of colorimetric methods."

Soil science, May 1948, p.426. 12 l.

"The book is modern, well illustrated, and well documented and it contains a great variety of useful tables of data. It shows a picture of each instrument, diagrams its construction, tells how it is used, and provides a considerable amount of information concerning applications in its use. References are given to publications of some 500 workers in these fields . . . Merits a prominent place in every modern laboratory."

Spangenberg, Karl R. Vacuum tubes. 860p. 1948. McGraw, New York, $7.50. (Electrical and electronic engineering series.)

Electronic industries & electronic instrumentation, May 1948, p.29. ⅛ col.

"A comprehensive survey of the physical laws which determine vacuum tube behavior is conducted . . . The outstanding tube types are dealt with individually and their operating characteristics explained in terms of their internal fields and their influence upon the electron flow. Attention is concentrated upon the internal factors which contribute to the operating characteristics of tubes such as determination of the shape of potential fields, solution of electron path equations, determination of space charge relations."

Science, May 14, 1948, p.514. ¾ col.

"An excellent textbook for early graduate or late undergraduate study of vacuum tubes—of vacuum tubes alone. Circuits and gas phenomena are hardly mentioned, but the treatment of vacuum tubes, from diodes, triodes, tetrodes, and pentodes through cathode-ray tubes and photocells to klystrons, magnetrons, and 'special' tubes is modern and penetrating . . . Especially outstanding for its chapters on Tetrodes, Pentodes, Tube Noise, Klystrons, and Magnetrons. There is much material presented here in textbook form for the first time. The index seems to be too brief. Mention of Hull and Williams in connection with the early work on the screen-grid-tube seems to be missing. But the book is largely free from errors and the format is excellent." *J. Barton Hoag.*

Stewart, Irvin. Organizing scientific research for war; the administrative history of the Office of Scientific Research and Development. 358p. 1948. Little, Boston, $5. (Science in World War II series.)

Science, June 11, 1948, p.633. ⅝ col.

"This history of how the OSRD was organized and how it functioned, through reams of paper and miles of red tape, is despite its lack of glamour, one of the epics of the past war, and Dr. Stewart is to be commended for the excellence of his work . . . As this is written, the National Science Foundation Bill still languishes in Congress. The supporters of this legislation will find much food for thought in Dr. Stewart's important book." *Morris C. Leikind.*

Technical Association of the Pulp and Paper Industry. Nature of the chemical components of wood; edited by Clarence J. West. 234p. The Association, 122 E. 42nd St., New York, $5 (Foreign, $6).

Paper trade journal, April 15, 1948, p.57. ⅓ col.

"The contents consists of the information brought out at the symposium on the subject presented at Appleton, Wis., in September 1947 under the sponsorship of the Fundamental Research Committee of the Association. The monograph is remarkable in its thorough and fundamental coverage of the chemistry of cellulose and lignin. At no previous time did so many eminent authorities gather together for the express purpose of bringing these complex subjects up to date. Among the major subjects covered are: Unsolved cellulose problems; the hemicelluloses, structural analysis of the polysaccharides, gums and mucilages; the proven chemistry of lignin, wood tannin, wood resins, the natural coloring matters in wood, and structure and synthesis of Gymnosperm lignin."

Terzaghi, Karl, & Peck, R. B. Soil mechanics in engineering practice. 566p. 1948. Wiley, New York, $5.50.

Engineering and mining journal, May 1948, p.127. ¼ col.

"The first two parts . . . deal with the physical properties of soils and the theoretical side of soil mechanics. The last part, and the most important from the viewpoint of the engineer, considers the practical side of the subject. It is concerned with getting satisfactory results in earthwork and foundation engineering at reasonable cost. The book points up the inherent complexities of natural soils, and the careful application of experience, theory, and experiment that is required to deal successfully with them."

Engineering news-record, June 10, 1948, p.112. ⅔ col.

"The section on design and construction has practically all that the average engineer needs to know about the subject. It describes soil exploration, comments on soil pressures and stability of slopes, then devotes many pages to foundations of all kinds of soils of many types. Most users will need the sections on physical properties of soils and theories on soils only when specifically referred to in the design and construction section. Great variations in soils and soil conditions limit definite statements or

generalities and the authors are chary in definite statements or promises on what soil will do. Not all will agree with the few definite statements that are made . . . The authors unqualifiedly recommend load tests on all soils, whether for spread footings or piles, as an economy measure. But they also show how some idea of stability of soils can be obtained in the laboratory." *Hal W. Hunt.*

Thomson, Louis M. Milne-. See Milne-Thomson, Louis M.

Torrey, Henry C., & Whitmer, C. A. Crystal rectifiers; edited by S. A. Goudsmit and others. 443p. 1948. McGraw, New York, $6. (M.I.T. radiation laboratory series, v.15.)

Electronics, June 1948, p.248, 250. 1⅓ col.

"Summarizing as it does the entire field of crystal rectifier development during the war, this authoritative book may be highly recommended to physicists interested in the theory of semi-conductors and point-contact rectifiers and to microwave and communication engineers interested in the properties and applications of crystal rectifiers." *H. Heins.*

General Electric review, May 1948, p.54, 56. ½ col.

"The authors . . . have compiled an excellent summary of the work done upon point-plane rectifiers in the United States and in England during the past seven years. While working at the Radiation Laboratory they obtained a vast amount of information from universities and industrial organizations. They have arranged this information carefully, added their own theories, and interpreted the data in an excellent fashion. As far as the reviewer knows, it is the only book of its kind on this subject . . . The authors have made every effort to include all available information upon the subject and to allocate fairly credit for inventions and development. The book has the reviewer's unqualified recommendation to all interested in semiconductors as well as to those seeking more specialized information on point-plane rectifiers." *H. Q. North.*

Review of scientific instruments, May 1948, p.362. 1 col.

"The authors . . . are eminently qualified to compile the treatise . . . The treatment in many sections is highly mathematical despite the fact that more lengthy theorems have been wisely relegated by the authors to the appropriate role [sic] of appendices. For this reason, the novice may find the going somewhat rough in spots. However, the book is written in a very clear manner, the order is as logical as the subject matter permits, and the illustrations have been aptly chosen to illustrate the text. Every physicist and chemist interested in semiconductors as well as every communication engineer will want to own a copy of this scholarly work." *A. W. Lawson.*

Science, May 14, 1948, p.515. 1 col.

"The scope of the book is not restricted to Radiation Laboratory projects, and the attempt is to encompass all contemporary effort devoted to the development of crystal rectifiers during the war, including some information concerning related activities in England. It is to be assumed that all work was closely coordinated . . . Well and carefully written. The very large amount of material is well arranged and makes interesting reading. The text covers the very interesting development aspects and manufacturing techniques, in addition to the theoretical and research work on crystal rectifiers. This book would be of interest to those engaged in microwave research and development in educational, governmental, commercial, and other institutions or agencies . . . The value of the book might have been greatly improved had the authors attempted to give their appraisal of the most promising avenues for continued research in the field of crystal rectifiers." *R. B. Wright.*

Townsend, John. Electrons in gases. 166p. 1948. Hutchinson, London, 25s. net.

Electronic engineering, May 1948, p.170. 1⅓ col.

"A logical, co-ordinated and very welcome summary of . . . forty years of research. The work of other experimenters is touched on, not always with approbation, insofar as it is relevant to the main topic; but the book is not a complete or exhaustive survey of the whole subject. It is rather a statement of Sir John's considered conclusions; and, as such, merits the closest attention of all interested in the subject . . . Sir John writes with vigour and clarity." *J. A. Crowther.*

Instrument practice, May 1948, p.295. ⅝ col.

"There are some 166 pages divided amongst 9 chapters. No index is included, but each chapter in the list of contents has sub-headings —a total of 140 of these being given. The scope of the book may be given by the fact that The Theory of Motion of Electrons and Ions in Gases is discussed in the first chapter. It is followed by Determination of the Energy of Agitation of Mobility of Electrons, The Mean Free Path and Mean Loss of Energy of Electrons in Elastic Collisions, Inequalities in the Velocities of Electrons, Ionisation of Monatomic Gases, and Actions of Positive Ions in Discharges . . . There are 41 tables and 31 line diagrams . . . and any reader engaged in the particular field which the book covers will find material of interest therein."

Trelease, Sam F. The scientific paper, how to prepare it, how to write it; a handbook for students and research workers in all branches of science. Revised edition of "The Preparation of Scientific and Technical Papers". 152p. 1947. Williams & Wilkins Co., Baltimore, $2.

Journal of the Franklin Institute, April 1948, p.349. ⅝ p.

"A practical little volume for students and research workers faced with the problem of writing scientific papers. Among the major topics treated are the arrangement of the paper, revision of the manuscript and preparation of final copy, literature citations, abbreviations of periodical publications, and illustrations . . . There are many other helpful hints including the use of tenses, acknowledgments, shipping instructions for illustrations, proof-reading, and the use of capitals and italics. A new feature . . . is a section on the use of the library for research purposes . . . Unfortunately there is one quite outdated statement about the planning of a union card catalogue in Philadelphia. Actually the Union Library Catalogue of the Philadelphia Metropolitan Area was incorporated in 1936 . . . In the section on indexing and abstracting tools, *Engineering Abstracts* is not current, having been published only from 1910 to 1913. These errors do not affect the

essential usability of the book, which contains in addition references to other sources for fuller information." *G. E. Pettengill.*

Veinott, Cyril G. Fractional horsepower electric motors. Ed.2, revised. 554p. 1948. McGraw, New York, $5.

Electrical world, April 10, 1948, p.191. 12 l.

"Approximately one-third of the original material is completely recast . . . Further effort has been made to keep the pages as specifically useful as possible to the applier and the repairers of small motors. Reference to the ASA, NEMA and AIEE standards have been revised to conform to the intervening changes. Other modernizations pertain to electrolytic capacitors, shaded-pole motors, hysteresis and inductor motors, and wartime forms of self-synchronous motors."

Electrician, May 14, 1948, p.1515. ⅔ col.

"Although . . . concerned with American practice, the bulk of the material is equally applicable to British machines, and the great amount of detailed information, as well as the simple treatment of theoretical principles, covering every type of fractional horse-power motor, makes it of great value to the practical man who has much to do with these machines . . . Emphasis throughout is on practical details of design, construction, testing and repair, and an excellent bibliography is provided at the end of each chapter for those who may wish for deeper study of theory or practice . . . Very well illustrated . . . and there are thirty-four tables of relevant data interspersed throughout . . . A chapter on 'Selecting a Motor for the Job' has been included. An appendix contains a trouble diagnosis chart and some useful tables, and there is also a glossary of terms applicable to motors in general. Altogether, this is a most creditable work and can be thoroughly recommended." *T. A. L.*

Popular homecraft, May-June 1948, p.324. 12 l.

"Packed with practical information on fractional horsepower motors of every description. Designed for repair men, operating engineers, and maintenance men, and salesmen in this field, it brings you detailed information on how to repair, maintain, install, apply, inspect, sell, test, manufacture, and design fractional horsepower motors according to standards set by ASA, NEMA and the AIEE."

Venable, William Mayo. Interpretation of spectra. 200p. 1948. Reinhold, New York, $6.

Crucible, April 1948, p.110. 1½ col.

"Of special interest to chemists because it attributes what are generally termed 'atomic' spectra not to chemical atoms themselves but to recombinations of particles produced by subdivision of chemical atoms into more elementary sub-atoms, as a result of removal of some of the electrons which normally hold the parts of the chemical atom together."

Petroleum processing, June 1948, p.611. ½ col.

"Of value for at least two reasons: 1) the growth in the use of analytical and control instruments of the spectroscopic type in recent years requires more works helpful to the laboratory personnel operating such devices, and 2) it presents an interesting new opinion regarding the origins of spectral lines. A set of tables, collected for convenience in reference at the end of the book, contain data not available elsewhere regarding intimate relationships between spectra emitted by supposedly entirely different sources."

Vincent, Edward T. Supercharging the internal-combustion engine. 315p. 1948. McGraw, New York, $5.

Combustion, May 1948, p.53. ⅛ col.

"Represents a technical treatise combined with descriptive matter, a certain amount of design information, and performance data . . . Based largely on notes employed by Professor Vincent in a government-sponsored course on superchargers during the war. Chapters deal with historical development, thermodynamics, the engine cycle, types of compressors, the impeller and diffuser, estimating operating conditions, surging in centrifugal compressors, turbo-supercharging, the axial-flow compressor, and the supercharged diesel cycle."

Weil, B. H., & Lane, J. C. Synthetic petroleum from the synthine process. 303p. 1948. Remsen Press, 26 Court St., Brooklyn, $6.75.

Oil and gas journal, June 10, 1948, p.105. ⅔ col.

"Should appeal to two main groups of readers as well as to students in general in this field; those who wish to obtain a general thinking knowledge of the developments without digging too deeply into the details will find it an excellent resume [sic] of fundamental chemical and technical facts; for those who wish to delve deeply into the subject and require a guide book it likewise will serve to separate much of the wheat from the chaff and to shorten the total time required to cover the field."

Petroleum processing, May 1948, p.508. 1 col.

"The first text published in this country, to the best of our knowledge, which treats any phase of the synthetic fuels picture completely . . . Devoted strictly to the process for producing synthetic petroleum products by the catalytic hydrogenation of carbon monoxide. The authors elect, with arguments as to why, to call it the Synthine process; some readers may recognize it more readily as the basic Fischer-Tropsch reaction . . . Presented in four logical sections, well organized and referenced: (1) production and purification of the synthesis gas, (2) catalytic synthesis reactions, (3) products, by-products, and derivatives, and (4) basic economics and current developments. If anywhere, it is in the latter section—economics and current developments—that the book falls short of being adequate . . . In a field where so many developments have taken place during just the last year . . . it is not surprising that a good deal of the data included is [sic] already out-of-date . . . One of the most valuable features . . . is the wealth of references it contains for the reader interested in further research on the subject. In addition to nearly 400 different listings in the individual chapter bibliographies, three appendices contain a classified list of over 2000 patents; an alphabetical, indexed list of government-released reports, and a supplemental bibliography of about 80 recent literature references."

Wellman, William R. Elementary industrial electronics. 371p. 1948. Van Nostrand, New York, $4.

Electronic industries & electronic instrumentation, May 1948, p.29. ⅛ col.

"The basic application of electronic methods

to non-communication problems are shown in this textbook, written for technical students (probably best adapted to high school and non-collegiate technical classes) . . . Covers the majority of these uses in a practical manner, followed by descriptions of laboratory experiments. The material is well planned and although some confusion was noted by the mixing of several sets of symbols in diagrams, students should be able to follow the presentations without auxiliary instructions."

Radio & television news, Aug. 1948, p.131. ⅜ col.

"A basic book covering some of the principles involved in the more important applications of electronics in industrial plants . . . Not designed as a manual for the serviceman engaged in troubleshooting or maintaining industrial electronic control equipment but rather as a guide for the beginner . . . The material is presented in easily-understood form. A series of experiments has been included in order that the instructor (or student if self-instructed) can set up typical industrial electronic problems without resorting to elaborate or expensive equipment . . . May be used equally well in the classroom or by the student studying the subject at home."

West, Clarence J. See Technical Association of the Pulp and Paper Industry.

Wherry, Edgar T. Wild flower guide; northeastern and midland United States. 202p. 1948. Doubleday, New York, $3.

Audubon magazine, May-June 1948, p.192. ⅛ col.

"A handsome, handy, pocket-sized guide to the native and introduced wild flowers most commonly encountered in the region from the eastern Dakotas east, and Missouri, Kentucky and Virginia north. Its arrangement is based on botanical relationship with such brief simple keys that any layman can master them in a few minutes. The excellent color plates and drawings . . . cover every species in the book and make the use of further keys unnecessary, although a full color key is included in the appendix. A valuable feature . . . is the excellent material under the headings 'habitat' and 'culture' . . . Sections on conservation and plant ecology are unique in this type of book and should be of great interest to amateur naturalists."

Carnegie magazine, May 1948, p.315. 3½ col. including an illustration.

"Unique in being an authoritative source of information on the soil reactions of so large a number of wild flowers. For various reasons, it is bound to be not only a very popular and useful book for the amateur, but for professional botanists as well." *O. E. Jennings.*

Natural history, May 1948, p.198. ⅜ col.

"All the so-called 'wild-flower books' suffer from the same trouble: they are restricted in their scope. They include many plants which one may never see around his home and omit many others which are locally common or conspicuous. Dr. Wherry's book is no exception. He describes and Miss Hoffman illustrates 500 kinds out of a total of possibly 2500 kinds of plants that deserve the name of wild flower. No two persons would make the same selection; no person would fully agree with Wherry's choice, but, being an expert botanist and thoroughly familiar with the flora of the region, he has certainly done as well in this respect as any other author and far better than some have done in the past." *H. A. Gleason.*

Whittaker, Roland M. Rudiments of chemistry; the chemist's view of the nature of matter. 310p. 1947. Ronald, New York, $3.

Chemical and engineering news, May 17, 1948, p.1478. ½ col.

"Excellently composed and interestingly written . . . Presents many fundamental thoughts and facts in their modern interpretation. From the onset, the author very wisely stresses the relative value of the observed facts and statistical character of all our theories and laws of nature. In straight and clear form, the electrical character of matter and energy is presented, gradually introducing the reader to the concepts of nuclei, atoms, molecules, and chemical interaction. The book is supposedly written for non-chemists. It certainly can be highly recommended for every nonchemical reader to orient himself in fundamentals of natural science. Even a chemist who, in his daily struggle with chemical processes, is not quite clear on the subject of where some evasive electrons are jumping will find Dr. Whittaker's book fascinating reading." *V. I. Komarewsky.*

Willems, J. Daniel. Gem cutting. 224p. 1948. Manual Arts Press, Peoria, Ill., $3.50.

Earth science digest, June 1948, p.30. ⅜ col.

"Based upon the author's extensive experience in the field of gem cutting, this book should prove to be a valuable guide for both the amateur gem cutter and the professional lapidarist . . . Covers such subjects as how to recognize good quality stones in the rough; principles of light reflection; the construction of equipment; planning, marking, sawing, grinding, and polishing; optical properties of the gem materials; diamond cutting; and, of course, a chapter on the famous Willems' faceting device."

Williams, R. Tecwyn. Detoxication mechanisms; the metabolism of drugs and allied organic compounds. 288p. 1947. Wiley, New York, $5.50.

Canadian chemistry and process industries, April 1948, p.357. ½ col.

"The author has gathered together, in a logical manner, a large amount of information and literature references on the metabolic fate of organic compounds foreign to the body, so that working hypotheses can be advanced. This study is intended to guide—not alone the specialist—but a more general audience of readers. It is directed toward students as well as experts in the field."

Woodcock, Frederic L. Design of metal cutting tools. 405p. 1948. McGraw, New York, $5.

American machinist, June 17, 1948, p.194. ½ col.

"In the preparation of this book, a painstaking and thoroughly competent job has been done . . . The feature is that the author does not content himself with merely stating the recommended cutting angles, for example, but explains why they are needed and how they are determined. The designer is thus freed from the bonds of standard practice and enabled to tailor each particular tool to suit the job in hand . . . Profusely illustrated, it merits a

place on every tool designer's desk and in every reference library."

Modern machine shop, May 1948, p.344. ⅜ col.

"This useful volume is said to provide a wealth of data—rules, formulas, and tabular information—to aid tool designers and draftsmen, shop foremen, superintendents, and so on, in the most profitable and efficient design of metal cutting tools. Based on actual shop experience, the book illustrates and explains to the reader the practical application of tool to the job, how to salvage worn-out tools and adapt them to new uses, and how tools are made to function accurately and economically . . . Discusses fundamentals of design, including elements of cutting, materials, heat treatments, fluids, and so on, and features practical procedures and easy-to-follow instructions on the design of broaches, cutters, drills, hobs, punches, dies, reamers, and other tools. Numerous illustrations are utilized to bring out important details of all tools discussed."

Wostrel, John F., & Praetz, J. G. Household electric refrigeration. Ed.2. 458p. 1948. McGraw, New York, $4.50.

Electrical times, May 20, 1948, p.622. ⅜ col.

"An excellent volume for the practical man . . . to study. The details of all types of pump likely to be encountered are given together with properties of refrigerants, with the precautions to be taken when handling them; fault finding charts; making of adjustments, diagnosis of motor troubles, and finally an excellent chapter is devoted to the fundamental laws of food preservation. An appendix gives short details of a large number of types of American-made refrigerators . . . Can be confidently recommended to all who are interested in modern household refrigerators, both from a design and a maintenance viewpoint."

Zeluff, Vin, & Markus, John. What electronics does. 306p. 1948. McGraw, New York, $3.

Military engineer, April 1948, p.197. ⅜ col.

"In over four hundred carefully chosen examples, the authors provide a concise, interesting, non-technical bird's-eye-view of electronics as it operates today in every field of human activity . . . The book is as interesting as a good detective story and is as instructive as it is interesting. Very definitely recommended." *H. F.*

Mines magazine, April 1948, p.42. 12 l.

"This practical, easy-to-read book describes the many interesting jobs electron tubes are doing in the industrial world today . . . Explains hundreds of commercial applications of electron tubes, including cooking and defrosting foods, spray painting, separating ore, detecting flaws in metal objects, tracking schools of fish, locating minerals, and many others. Over 400 photographs and diagrams illustrate the operation of the various electronics machines."

Scientific monthly, June 1948, p.523. ¾ col.

"The general reader who wants to know what electronics can do for him will find in the lively descriptions of actual devices much up-to-date interesting information, and perhaps a stimulus for thinking of still newer techniques or better ways of doing old jobs . . . Should be popular in school libraries." *Robert L. Weber.*

Zoethout, William D. Introduction to human physiology. 407p. 1948. Mosby, St. Louis, $4.

Journal of health and physical education, May 1948, p.384. 10 l.

"A shortened and simplified edition of Zoethout-Tuttle *Textbook of Physiology* and is designed for senior high school and freshman or sophomore college students who do not intend to take any more advanced work in physiology. Whenever possible, the author has attempted to impress upon the reader the importance of personalizing the knowledge gained. The questions at the end of the chapters are not so much for reviewing the subject discussed as to make the reader reflect upon his own experience insofar as it has a bearing on the matter discussed."

Science counselor, June 1948, p.63. ¼ col.

"An excellent text for the introductory physiology course since it is well written and represents an adequate treatment for the beginning student . . . The usual pitfalls of writing a simplified text of physiology, that of over-simplification and a tendency to lean toward the direction of a text in hygiene, are avoided . . . May be recommended for an introductory course in physiology or a survey course. It will not replace the more advanced books on physiology, nor was it intended to do so." *Alfred Halpern.*

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